

CALIFORNIA GEOLOGICAL SURVEY LIBRARY

TEACHER RESOURCE CENTER

ANNOTATED CATALOG

Grades K through 12

Books, Kits, Videos, CD-Roms, Globes and more





DIVISION OF MINES AND GEOLOGY
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AIR

PUBLICATIONS

Investigating air : organizing, analyzing, and interpreting information about the quality of air / McFall, Lauren. -- Arlington, VA: National Science Teachers Association, c1999.
(TD 883.15 I58 1999)
69 p. : ill. ; 28 cm.
Using data generated by researchers, students generate their own data in situations analogous to real air quality issues. Includes teacher section and class activities.
GRADE: HIGH SCHOOL

ASTRONOMY

KITS

Asteroid! : an event-based science astronomy module / Wright, Russell G. -- Menlo Park, CA: Alternative Publishing Group, Addison-Wesley Pub. Co, 1994. (QB 651 W75 1994 KIT)
1 videocassette + 1 teacher's guide (32 p.) + 1 student edition.
An approaching asteroid is the focus of a 5-week astronomy unit. Explores the ellipticity of solar system orbits, ties earth to the family of planets, and develops an understanding of our planet's place in the solar system.
GRADES: JR. HIGH

Planets: new discoveries -- Fort Collins, CO: Scott Resources, c1992. (QB 631 .P5 1992)
1 videocassette, 9 plastic bags containing samples and tools, 1 poster, 1 teacher's guide (loose leaf) ; in box 19 x 59 x 36 cm.
Create a scale model of the solar system, analyze the processes that formed the planets, understand planetary motion. Plastic bags contain samples and tools for nine lab stations: 1. Accurate models--2. Radiation--3. Crater formation--5. Visualizing in 3-D--6. Problem solving in space--7. Rocketry--8. Matching rocks to processes-- 9. Meteorites--10. Comets
GRADES: 7-12

MODEL

Celestial globe [globe] -- Northbrook, IL: Hubbard Scientific Co, c1973. (G 3160 C44 1973)
1 globe : col., plastic & metal ; 31 cm. in diam. + lesson plan (8 p. ; 28 cm.)
A model of the celestial sphere to teach the locations, names, and shapes of the constellations... demonstrates the relationship between earth and the stars, planets, galaxies, and other celestial objects in the universe... designed to show positions of the stars at any given time and date as seen from any location on earth... essentially a 3-dimensional star finder and not meant to show actual motions of earth, moon, and planets. All

observations are earth-centered and therefore earth is located in the center of the globe.
GRADES: JR. HIGH-HIGH SCHOOL

CD-ROMS

Earth and the inner planets Version 1.0 / EOA Scientific Systems, Inc. -- Halifax, N.S.:EOA Scientific Systems, Inc. c2001.(QB 601 E12 2001 CD-ROM)
1 computer optical disc : sd., col. ; 4 3/4 in
Covers Mercury, Venus, Earth, Mars, and their moons as well as the Sun and the Solar System
System requirements for Windows: Windows 98/95/NT/2000; Pentium; CD-ROM drive; QuickTime; web browser
System requirements for Macintosh: Macintosh OS 7.1+; iMac or G3+; CD-ROM drive; QuickTime; web browser
GRADES: 6-12

Our universe Version 1.0 / EOA Scientific Systems, Inc.-- Halifax, N.S.:EOA Scientific Systems, Inc. c2001.
(QB 500 O93 2001 CD-ROM)
1 computer optical disc : sd., col. ; 4 3/4 in
Covers topics such as stars and galaxies, how we know about space, the fundamentals of physical science, satellite exploration and the history of rocketry
System requirements for Windows: Windows 98/95/NT/2000; Pentium; CD-ROM drive; QuickTime; web browser
System requirements for Macintosh: Macintosh OS 7.1+; iMac or G3+; CD-ROM drive; QuickTime; web browse
GRADES: 6-12

The outer planets Version 1.0 / EOA Scientific Systems, Inc. -- Halifax, N.S.:EOA Scientific Systems, Inc. c2001.
(QB 601 O94 2001 CD-ROM)
1 computer optical disc : sd., col. ; 4 3/4 in
Covers topics such as an exploration of Jupiter, Saturn, Neptune, Uranus, Pluto and their moons. Also, the study of comets, asteroids, and meteors
System requirements for Windows: Windows 98/95/NT/2000; Pentium; CD-ROM drive; QuickTime
System requirements for Macintosh: Macintosh OS 7.1+; iMac or G3+; CD-ROM drive; QuickTime
GRADES: 6-12

PUBLICATIONS

Cosmic science : over 40 gravity-defying, earth-orbiting, space-cruising activities for kids / Wiese, Jim. -- New York: J. Wiley, c1997.(QB 500.22 W54 1997)
viii, 120 p. : ill. ; 26 cm.
Instructions for activities exploring gravity, moon craters, the planets of our solar system, and other aspects of outer space.
GRADES: ELEMENTARY-MIDDLE SCHOOL

More universe at your fingertips : an astronomy activity and resource notebook / Fraknoi, Andrew; Schatz, Dennis. -- San Francisco, CA: Project Astro, Astronomical Society of the Pacific, c2000.

(QB 61 U851 2000)

1 v. : ill. ; 30 cm.

Each activity tells what students will do, lists necessary materials, and gives tips for teachers. Activities are modified for grade levels.

Reproducible pages.

GRADES: K-12

BEACHES

PUBLICATIONS

On sandy shores : teacher's guide: marine activities for Grades 2-4 / Strang, Craig. -- Berkeley, CA: Lawrence Hall of Science, University of California at Berkeley, c1996. (GB 454 B3 S72 1996)

x, 202 p. : ill. ; 28 cm.

Explores aspects of the "sandy shore", from grains of sand to commonly found animals to more complex biological and ecological interactions. "Designed to be used with no modification in culturally diverse classrooms with large numbers of English language learners". Activities include: Beach Bucket Scavenger Hunt-- Sand on Stage--The Sights that Sand has Seen-- Build a Sandy Beach--Oil on the Beach. Includes reproducible masters.

GRADES: 2-4

DESERTS

PUBLICATIONS

Desert / Sayre, April Pulley. -- 1st ed. -- New York: Twenty-First Century Books, 1994. (QH 541.1 D4S29 1994)

64 p. : col. ill., col. map ; 24 cm.

Chapters: The desert biome--Desert in North America -- Desert weather, climate, and geology--Desert plants-- Desert animals-- Desert communities--People and the desert--Resources and what you can do to help.

GRADES: UPPER ELEMENTARY-JR. HIGH

EARTH SCIENCE

KITS

Craters! : a multi-science approach to cratering and impacts / Hartmann, William K; Cain, Joe. -- Arlington, VA: National Science Teachers Association, c1995. (QB 755 H257 1995 KIT)

xiv, 225 p. : ill., maps ; 28 cm. + 1 computer laser optical disc.

The book includes 20 ready-to-use, hands-on activities that use cratering to teach key concepts in physics, astronomy, biology, and earth sciences: can be a whole curriculum or presented in smaller units. Although the book can be used alone, the accompanying CD-ROM is for the reproduction of high-quality images.

System requirements: Macintosh LC III or higher; system 7.0 or higher; double-speed CD-ROM; gray scale or color

monitor System requirements: PC 386 33Mhz; 4Mb RAM;
Microsoft Windows; double speed CD-ROM; gray scale or
color monitor.
GRADES: MIDDLE-HIGH SCHOOL

CD-ROMS

Teaching earth science / Alpha, Tau Rho. -- Menlo
Park, CA: U.S. Geological Survey, 1998. (QE 40 A4 1998 CD-ROM)
1 computer laser optical disc ; 4 3/4 in.
Offers seventeen teaching tools covering geologic
processes, earthquakes and faulting, and map projections
and globes. Includes printable Earth and Tectonic Globes
section.
System requirements: 68020 Macintosh or better; 8MB RAM;
System 7.0 or higher; HyperCard player 2.2 or later; VGA
graphics display; thirteen-inch color monitor; CD-ROM
drive.

PUBLICATIONS

75 easy earth science demonstrations / Kardos, Thomas; Soloway,
Nicholas. -- Portland, ME: J. Weston Walch, c1997. (QE 41 K27 1997)
x, 95 p. : ill. ; 28 cm
Includes index
GRADES: JR. HIGH - HIGH SCHOOL.

Earth / Van Rose, Susanna. -- 1st American ed. -- London ; New York:
Dorling Kindersley, 1994. (QE 29 V35 1994)
64 p. : col. ill. ; 29 cm.
Includes index

Earth at hand : a collection of articles from NSTA's journals /
Stroud, Sharon M; Callister, Jeffrey C. -- Washington, DC: National
Science Teachers Association, c1993. (QE 40 E26 1993)
ix, 165 p. : ill. ; 28 cm.
A selection of the best teacher-devised classroom
strategies from National Science Teacher Association's
journals to help teach concepts of geology, meteorology,
astronomy, and oceanography. Each article gives
resources to plan a lesson, a unit, or a curriculum.
GRADES: 5-10.

**Earth child 2000 : earth science for young children : games, stories,
activities, and experiments** / Sheehan, Kathryn. -- New ed. with
teacher's guide. - Tulsa, OK: Council Oak Books, c1998. (GE 11 S53 1998)
475 p. : ill., map ; 27 cm.
GRADES: ELEMENTARY GRADES.

Earth science investigations : edited by Margaret A. Oosterman and
Mark T. Schmidt -- Alexandria, VA: American Geological Institute,
1990. (QE 42 O6 1990)
231 p. : ill. ; 28 cm.
Twenty-six classroom-tested research activities
developed by teachers. Each hands-on exercise provides
the concepts, vocabulary, and worksheets students will
need to complete it.

GRADES: 8-12.

Geoscience education and training : in schools and universities, for industry and public awareness / Stow, D. A. V. (Dorrick A. V.); McCall, G. J. H. -- Rotterdam ; Brookfield, VT: A.A. Balkema, 1996. (QE 40 G467 1996)

xix, 855 p. : ill. ; 25 cm.

Articles giving an international overview of geoscience education. Includes: Hoff, D.B., Elementary and secondary earth science in the USA, p. 173-182.

Hands-on earth science activities : for grades K-8 / Tolman, Marvin N. -- West Nyack, NY: Parker Pub. Co, c1995. (QE 40 T62 1995)

xxvi, 310 p. : ill. ; 28 cm.

"160 easy-to-use, hands-on activities"... covering Air, Water, Weather, The Earth, Ecology, Above the Earth, Beyond the Earth. Most materials needed for the activities are readily available in the school. Notes help teachers with background and questioning skills.

GRADES: K-8

Janice VanCleave's A+ projects in earth science : winning experiments for science fairs and extra credit / VanCleave, Janice Pratt. - New York: J. Wiley, c1999. (QE 29 V33 1999)

vi, 234 p. : ill. ; 24 cm.

Presents 30 sample science projects as well as ideas for small changes to the original experiments thereby encouraging creativity and increased learning. Topics include: rocks and minerals, meteorology, oceanography, plate tectonics, air fronts and the greenhouse effect.

Janice VanCleave's earth science for every kid : 101 easy experiments that really work / VanCleave, Janice Pratt. - New York: John Wiley, c1991.

(QE 29 V36 1991)

xiv, 231 p. : ill. ; 24 cm.

Instructions for experiments, each introducing a different earth science concept.

Janice VanCleave's science experiment sourcebook / VanCleave, Janice Pratt. - New York: Wiley, c1997. (Q 182.3 V38 1997)

xvi, 308 p. : ill. ; 30 cm.

Loose-leaf binder with 300 science experiments, grouped under the topics of astronomy, biology, chemistry, earth science and physics.

Natural disasters : earth science readings / Lobb, Nancy. -- Portland, ME: J. Weston Walch, c1996. (QE 42 L63 1996)

x, 150 p. : ill. ; 28 cm.

Covers volcanoes, earthquakes, tornadoes, hurricanes, winter storms, floods, tsunamis, fires and drought. Reproducible pages.

Contains both student and teacher sections.

Project earth science: geology / Ford, Brent A. -- Washington, DC: National Science Teachers Association, c1996. (QE 40 .F6 1996)

213 p. : ill. ; 28 cm.

A collection of hands-on activities and a series of readings. Built upon the unifying theory of plate tectonics... explores how this concept can be used to explain the occurrences of volcanoes, earthquakes, and other geologic phenomena... links to rock and mineral types and the rock cycle.

GRADES: MIDDLE SCHOOL

Teaching children about life and earth sciences : ideas and activities every teacher and parent can use / Levenson, Elaine. -- New York: TAB Books, c1994. (QH 315 .L39 1994)

xx, 236 p. : ill. ; 28 cm.

Topics include: Models-- The Five Senses--Weather-- Volcanoes, rocks, and erosion--Ecology.

Each topic begins with "Objectives" and "General background for parents and teachers". Required materials for suggested activities are also listed.

Understanding our changing planet : NASA's Mission to Planet Earth : fact book -- Washington, DC: National Aeronautics and Space Administration, 1995. (G 70.4 .E3 N37 1995)

16 p. : ill. ; 28 cm.

Booklet on NASA's program called Mission to Planet Earth (MTPE) which uses the unique perspective available from space to better understand environmental changes and to distinguish between natural changes and human-induced changes.

Water, stones & fossil bones : earth science activities for elementary and middle level grades / Lind, Karen. -- Washington, DC: National Science Teachers Association, c1991.(QE 44 .W37 1991)

xi, 125 p. : ill. ; 28 cm.

Teachers contribute their favorite earth science activities. In addition to providing teacher-tested, hands-on activities this book "stresses the teacher's role in selecting appropriate activities and asking questions that guide students to higher-order thinking. Questions to ask during the activity are suggested in margin notes, as are such teaching strategies."

Chapters: Space--Land--Water-- Air--The Earth's Past.

GRADES: ELEMENTARY-MIDDLE SCHOOL

EARTHQUAKES

KITS

Earthquake! [kit] : an event-based science module / Wright, Russell G. -- Menlo Park, CA: Innovative Learning Publications, Addison-Wesley Pub. Co, c1996.(QE 535.2 .C2 W7 KIT)

1 videocassette (25 min.) + teacher's guide (30 p.) + 1 student edition.

Video entitled "The Big Story: the quake of '89" shows news coverage of the Loma Prieta earthquake in 1989 as the "hook" to get students interested. Teacher's Guide includes class activities:Where earthquakes are found--

Liquefaction--Earthquake-resistant building design--
Earthquake engineering.
GRADES: MIDDLE- HIGH SCHOOL

MODELS

Seismograph model / Jones, Daniel J. (Daniel John) --
Chippewa Falls, WI: Hubbard Scientific Co. 1967. (QE 541 .J6 MODEL)
1 model : metal and plastic ; in box 18 x 23 x 23 cm.
The model was designed to illustrate the basic principles of the seismograph. A weight is suspended on a frame so that it can move from side to side but not vertically. A felt tip is mounted to the weight so it can record on a roll of paper. The strip of paper is pulled manually along its track and the pen will trace a smooth even line; but if a sudden jolt vibrates the table, the energy causes the recording track to move back and forth under the pen, producing zigzag lines. Accompanied by Lesson Plan (4 p.)

CD-ROMS

Earthquakes Version 1.0 / Discovery Communications, Inc. -- Bethesda, MD: Discovery Channel School, Discovery Communications c2000. (QE 534.2 E12a 2000 CD-ROM)
1 computer optical disc : sd., col. ; 4 3/4 in. + 1 booklet (7 p. : ill. ; 12 cm.)
Teachers guide on disc
Covers various aspects of earthquakes through videos, learning activities and searchable World Book Encyclopedia articles. Useful tools include the Studio - a tool for creating multimedia presentations, an answer key to questions, and handouts for teachers.
GRADES: MIDDLE GRADES

VIDEOS

Earth Science in Action : Earthquakes / Schlessinger Media, Burrud Productions. -- Wynnewood, PA: Schlessinger Media, c2000. (QE 534.2 E12 2000 VIDEO)
1 videocassette (23 min.) : sd., col. with b&w sequences ; 1/2 in. + 1 teacher's guide (5 p. ; 19 x 28 cm. folded to 19 to 10 cm.)
Combines live action and animation
"Based on the concepts outlined in the National science education standards for Earth & space science: structure of the Earth system, Earth's history and Earth in the solar system"--Container
Teacher's guide includes program summary, vocabulary, discussion for before and after viewing, questions, follow-up activities and resources
Executive producers, Andrew Schlessinger and Tracy Mitchell
This video teaches students about the causes of earthquakes and about the kinds of damage they can do, and how scientists are learning to predict them.
VHS
Closed-captioned for the hearing impaired
GRADES: 5-8

Earthquakes: understanding the hazards / Prose

Doug; Saperstone, Herb; Miller, Eric. -- Fort Collins, CO: Scott Resources, c1994.(QE 534.2 .E7 1994 VIDEO)

1 videocassette (21 min.) : sd., col. ; 1/2 in + teacher's guide.

Discusses physical occurrences below the earth's surface during an earthquake, identifies the type of waves generated by underground rock slippage, investigates above-ground effects of earthquakes, explains how quakes are measured and recorded, and identifies earthquake-prone areas in the world.

GRADE: 7-12.

Killer quake -- Boston, MA: WGBH Boston Video,

1994.(QE 535.2 .U6 K54 1994 VIDEO)

1 videocassette (60 min.) VHS : sd., col. ; 1/2 in.

Originally broadcast on PBS as an episode of NOVA.

Metropolitan Los Angeles is sitting on ground zero, and even as southern California struggles to repair itself from the tragedy at Northridge, seismic pressure continues to build below the ground. NOVA examines whether we can learn enough about these geological mysteries in time to minimize widespread destruction.

The Hayward fault - we can't ignore it; a video tape / Hirschfeld,

Sue Ellen. -- Menlo Park, CA: U.S. Geological Survey, [1996]

(USGS OFR 95-814 A, B VIDEO)

1 videocassette (62 min.): sd., col. ; 1/2 in. + 1 teacher's guide (5 p.)

Aimed at a general interest audience, including students from middle school to college. Can be used to teach about earthquakes, faults, and the impact on society when a damaging earthquake occurs in a populated area. Topics include fault-related landforms, fault creep, the fault plane at depth, relationship between creep and fault rupture. It does not discuss plate tectonics nor the "ring of fire" around the Pacific Ocean. Instead it focuses on the features and science of a particularly dangerous fault and is thus complementary to other earthquake videos.

GRADES: MIDDLE SCHOOL-HIGH SCHOOL.

PUBLICATIONS

Earthquake / Dudman, John. - New York: Thomson Learning, 1993.

(QE 521.32 .D3 1993)

32 p. : col. ill. ; 28 cm.

Describes the destructive power of modern and historic earthquakes,

and explains how scientists use tools

Includes related projects.

The Loma Prieta earthquake of October 17, 1989 : a brief geologic view of what caused the Loma Prieta earthquake and implications for future California earthquakes: what happened... what is expected... what can be done. / Ward, Peter L. -- Washington, DC: U.S.

Geological Survey, 1990. (QE 535.2 .W37)

16 p. : ill., maps ; 22 x 28 cm.

Shock waves through Los Angeles : the Northridge earthquake / Vogel, Carole Garbuny. -- 1st ed. - Boston, MA: Little, Brown and Co. c1996. (QE 535.2 .U6 V64 1996)

32 p. : col. ill., col. maps ; 27 cm.

Examines the causes of the 1994 Northridge earthquake in southern California and describes the devastating effects of the quake.

EMERGENCY PREPAREDNESS

VIDEO

Adventures of the Disaster Dudes -- Washington, DC: FEMA : American Red Cross, [1993]. (HV 551.2 .A38 1993 VIDEO)

1 videocassette (14 min.) : sd., col. : 1/2 in.

Designed to educate children about safety measures in the event of a natural disaster.

GRADES: ELEMENTARY

Earthquake preparedness / Perez, Bill. - Los Angeles, CA: Hanna-Barbara Productions, c1990. (QE 535.2 E2 VIDEO)

1 videocassette (5:30 min.) : sd., col. ; 1/2 in.

Uses animated cartoon figure, Yogi Bear, to discuss preparedness and precautions for the home and neighborhood.

GRADES: ELEMENTARY GRADES

PUBLICATIONS

Emergency preparedness : classroom activities - Grades K-6 / Utah Seismic Safety Commission. -- Farmington, UT: Utah Seismic Safety Commission, [1999] (QE 535.2 .U2 1999)

1 v., various paging.

Loose-leaf binder prepared by the Schools Subcommittee, Utah Seismic Safety Commission. Although a Utah resource, much of the information could be applied to any state. Sections include: Resources -- Tips for Teachers. Also an earthquake safety board game and a Children's Television Workshop audio cassette, "Elmo and the Earthquake" (K-3) and a song about finding safety spots, "Beatin' the Quake"

GRADES: ELEMENTARY

Emergency preparedness : classroom activities - Grades 7-12 / Utah Seismic Safety Commission. -- Farmington, UT: Utah Seismic Safety Commission, [1999] (QE 535.2 .U2x 1999)

1 v., various paging.

Loose-leaf binder prepared by the Schools Subcommittee, Utah Science Safety Commission. Although a Utah resource, most of the information could be applied to any state. Sections include: Resources -- Tips for teachers -- Hazard identification.

GRADES: MIDDLE-HIGH SCHOOL

FOSSIL FUELS

VIDEO

Earth Science in Action : Fossil fuels / Schlessinger Media Burrud Productions. -- Wynnewood, PA: Schlessinger Media, c2000.

(TJ 163.23 F752 2000 VIDEO)

1 videocassette (23 min.) : sd., col. ; 1/2 in. + 1 teacher's guide (5 p. ; 19 x 28 cm. folded to 19 x 10 cm)

Combines live action and animation

Teacher's guide includes program summary, vocabulary, discussion for before and after viewing, questions, follow-up activities and resources

Executive producers, Andrew Schlessinger and Tracy Mitchell

This video teaches students about the how fossil fuels were formed, and how they are found and used. Also discussed is conservation of this non-renewable resource and fuel alternatives

VHS

Closed-captioned for the hearing impaired

GRADES: 5-8

GEOLOGY

KIT

The formation of continents and mountains -- Evanston, IL: United Learning, [1998](QE 28 .F6 1988 KIT)

2 videocassettes, sd., col. : 1/2 in. + 1 teacher's guide (24 p.) + 1 set of blackline masters.

The lesson activities grow out of the content of the videos: 1. Introduction to geology (running time 10 mins). 2. Mountains, volcanoes, and earthquakes (running time 14 mins.) Teacher's guide provides background information and suggested instructional procedures.

Blackline masters for follow-up activities. Materials needed are regular classroom supplies (such as crayons, scissors, transparent tape, heavy construction paper) and are not included in the kit.

GRADES: 5-9

Earth history model / Jones, Daniel J. (Daniel John) -- [s.l.] Hubbard Scientific Co. 1967. (QE 714.5 .J6 KIT)

19 fossils : plastic ; in box, 27 x 16 x 3 cm. + 1 teacher's guide.

3-D model correlates rock layers to geologic time periods. Twenty replica fossils for students to match to appropriate strata, representing the aquatic and terrestrial life in the Pre-Cambrian through Cenozoic eras. Periods and years are also indicated on the chart.

Teacher's guide includes class activities.

GRADES: 5-12

Geology I: Transparencies for the overhead projector -- Northbrook, IL: Hubbard Scientific Co, 1984. (QE 29 .G4 KIT)

6 transparencies (with attached overlays) : col. + 1 teacher's guide.

The transparencies have four overlays and moveable parts to help students comprehend basic geological processes.

Includes: Volcan --Folded mountain--Fault mountain--
Alpine glacier Rock cycle--Geologic time. Teacher's
guide includes follow-up activities.
GRADES: 6-12

Geology demonstration kit / Pacilio, James V. -- Northbrook,
IL: Hubbard, 1994.(QE 28.2 .P3 KIT)
1 demonstration tray, 3 pieces col. flexible foam, 3 simulated
cardboard rock formations, 1 model erupting volcano, 4 pieces
rigid foam + 1 instruction sheet + 1 study guide ; in container 70
x 47 x 8 cm.
Permits students at all levels to visualize the causes
and forces that shape the earth's surface: provides a
basic geologic understanding for elementary students,
and more complex subjects for the advanced student.
Landform-building actions of volcanoes, folding, and
faulting can be demonstrated.
GRADES: UPPER ELEMENTARY-HIGH SCHOOL

Our amazing colliding continents : earth science kit / Crowell,
Caleb. -- New York, NY: Educational Design, 1997.(QE 29 .C7 KIT)
2 snap-together plastic globes + 1 flipbook + world map with 4
overlays + 5 rock samples in plastic bag + 1 instructional booklet.
Activities include plate tectonics and rock formation
GRADES: UPPER ELEMENTARY GRADES-JR. HIGH

Volcanoes, dinosaurs, & fossils -- rev. 1997. -- Salt Lake
City, UT: Wild Goose Co. 1997.(QE 29 .V6 KIT)
8 samples of volcanic rocks, 4 plastic fossils, 1 fossilized
insect, chemicals + 1 instruction booklet.
Hands-on activities introduce students to basic geology.
Includes experiments to make plaster fossils, fumarole
gas, and simulate a geyser.
GRADES: ELEMENTARY GRADES

MODELS

Geology models [model] / Lewis, Robert B. -- Northbrook, IL:
Hubbard Scientific Co. c1963. (GB 401 .H83 KIT)
8 models : polystyrene, col. + 1 study guide "Geology Models"
[35 p.]
The models show typical topographic forms and their
relation to underlying geologic structures: 1. Coastline
of submergence -- 2. Volcanism -- 3. Fault block
mountains -- 4. Alpine glaciation-- 5. Dome mountains --
6. Continental glaciation -- 7. Folded mountains -- 8.
Coastal plain.

Hubbard landform study program [model] / Lewis, Robert B; White,
George W. -- Northbrook, IL: Hubbard Scientific Co. c1969.
(GB 401 .H82 1969 KIT)
landform models (8 pieces) + 1 lesson plan booklet + 1 student
lab investigations booklet + 7 audio tapes; in box, 33 x 48 x 27
cm.
The models are designed to present the basic concepts of
geography and geology. Eight separate landform models
form a single, 3 ft. x 3 ft. tri-dimensional model of

mountains, lakes, rivers, deserts, glaciers, coastlines, canyons and cultural points of interest for field trip excursions conducted in the classroom via audio tapes. The Lab Investigations booklet includes one investigation for each landform.

CD-ROM

Earth's changing surface Version 1.0 / EOA Scientific Systems, Inc. -- Halifax, NS: EOA Scientific Systems, 2001.
(GB 401.5 E247 2001 CD-ROM)

1 computer optical disc : col. ; 4 3/4 in

Covers topics such as study of weathering, erosion and soils, rivers and groundwater, glacier and glaciation, ocean topography, shorelines and landforms on earth, geologic history case study, and careers in science.

GRADES: 6-12

Geode: geologic explorations on disk /

Tarbut, Edward J; Lutgens, Frederick K; Tasa, Dennis. -- Upper Saddle River, NJ: Prentice-Hall, c1996. (QE 26.2 .T385 1996 CD-ROM)

1 computer laser optical disk : col. ; 4 3/4 in.

Designed as an interactive learning experience for beginning geology students, Geode provides exercises and activities that allow the user to examine and review important facts and concepts. Animations, illustrations and photographs accompany the explanations; many sections are also appropriate for use by instructors in classroom demonstrations. System requirements: For Macintosh: Macintosh with 256 color graphics; 13" or larger display (640 x 480 or higher); CD-ROM double-speed drive; 4 MB free RAM memory; System 6.0.7 or newer. For Windows: IBM compatible 386 or better; SVGA (256 colors in 640 x 480); CD-ROM double-speed drive; 4 MB RAM (8 MB suggested); Windows 3.1 (enhanced mode) or Windows 95.

Planet Earth Version 1.0 / EOA Scientific Systems, Inc.-- Halifax, NS: EOA Scientific Systems, c2001.
(QB 501.3 P712 2001 CD-ROM)

1 computer optical disc : col. ; 4 3/4 in

Takes the grand tour starting with the formation of the solar system. Then discovers the age of the Earth and understands the orbital characteristics of our planet

GRADES: 6-12

VIDEOS

The Earth has a history -- Boulder, CO: Geological Society of America, c1989. (QE 508 .E2 1989 VIDEO)

1 videocassette (20 min.) : sd., col. ; 1/2 in. + 1 guide ([10] leaves : maps ; 28 cm.)

In this study module, A. R. Palmer demonstrates the simple principles that form the basis for understanding geologic time, literally "walking the viewer through time" in the colorful Flatirons area of the Rocky Mountain Front Range near Boulder, Colorado.

Supplemental teacher material includes class exercises

for a time line and to demonstrate the concept of geological rate.

GRADES: JR. HIGH-HIGH SCHOOL

Earth revealed. Program 1-4: 1:Down to earth. 2: The restless planet. 3: Earth's interior. 4: The sea floor. -- S. Burlington, VT: Annenburg/CPB Multimedia Collection, [1992]
(QE 28.2 .E3 1992 VIDEO)

1 videocassette (U-matic) (60 min.) : sd., col. ; 3/4 in.
"Down to earth" introduces students to the field of geology. "The restless planet" revisits the beginnings of the solar system and the evolving earth. "Earth's Interior" demonstrates how seismic waves occur and explains measurement of gravity, heat flow, and earth magnetism to provide information about earth's interior. "The Sea Floor" examines major sea floor features.

GRADES: HIGH SCHOOL

Earth revealed. Program 5-8: 5: Birth of a theory. 6: Plate dynamics. 7: Mountain building. 8: Earth's structures. -- S. Burlington, VT: Annenburg/CPB Multimedia Collection, [1992]
(QE 28.2 .E3 1992b VIDEO)

1 videocassette (U-matic) (60 min.) : sd., col. ; 3/4 in.
"The birth of a theory" traces origins of the ideas of continental drift and sea floor spreading and their contributions to plate tectonics theory. "Plate tectonics" introduces the theory and concepts about movement of earth's plates. "Mountain building" shows how major mountain belts and continents have evolved. "Earth's structures" illustrates how bedrock responds to tectonic forces originating within the earth.

GRADES: HIGH SCHOOL

Earth revealed. Program 9-12: 9: Earthquakes. 10: Geologic time. 11: Evolution through time. 12: Minerals. -- S. Burlington, VT: Annenburg/CPB Multimedia Collection, [1992]
(QE 28.2 .E3 1992c VIDEO)

1 videocassette (U-matic) (60 min.) : sd., col. ; 3/4 in.
Programs 9-12 cover: Earthquakes -- Geologic time -- Evolution through time -- Minerals

GRADES: HIGH SCHOOL

Earth revealed. Program 13-16: 13: Volcanism. 14: Intrusive igneous rocks. 15: Weathering and soils. 16: Mass wasting. -- S. Burlington, VT: Annenburg/CPB Multimedia Collection, [1992](QE 28.2 .E3 1992d VIDEO)

1 videocassette (U-matic) (60 min.) : sd., col. ; 3/4 in.
Programs 13-16 cover: Volcanism -- Intrusive igneous rocks -- Weathering and soils -- Mass wasting

GRADES: HIGH SCHOOL

Earth revealed. Program 17-20: 17: Sedimentary rocks. 18: Metamorphic rocks. 19: Running water I. 20: Running water -- S. Burlington, VT: Annenburg/CPB Multimedia Collection, [1992]
(QE 28.2 .E3 1992e VIDEO)

1 videocassette (U-matic) (60 min.) : sd., col. ; 3/4 in.
"Sedimentary rocks" illustrates the importance of

sedimentary rocks in understanding the earth's surface. "Metamorphic rocks" examines causative factors of morphism and the kinds of rocks it produces. "Running water I and II" examines the role running water plays in sculpting earth's surface and how human activity can intensify or reduce flood danger.

GRADES: HIGH SCHOOL

Earth revealed. Program 21-24: 21: Groundwater. 22: Wind, dust, and deserts. 23: Glaciers. 24: Waves, beaches, and coasts. -- S. Burlington, VT: Annenburg/CPB Multimedia Collection, [1992](QE 28.2 .E3 1992f VIDEO)

1 videocassette (U-matic) (60 min.) : sd., col. ; 3/4 in.
"Groundwater" explains how groundwater is distributed and measures its importance to human life. "Wind, dust and deserts" covers formation and geologic features of deserts. "Glaciers" discusses the properties of glaciers. "Waves, beaches, and coasts" demonstrates the importance of waves on coastal landforms.

GRADES: HIGH SCHOOL

Earth revealed. Program 25-26: 25: Living with earth, Part I. 26: Living with earth, Part II. -- S. Burlington, VT: Annenburg/CPB Multimedia Collection, [1992](QE 28.2 .E3 1992g VIDEO)

1 videocassette (U-matic) (60 min.) : sd., col. ; 3/4 in.
"Living with earth, Part I and II" examines the impact that earthquakes and other destructive geologic forces have on humans as well as the impact human activities have on earth.

GRADES: HIGH SCHOOL

Earth Science in Action : Geological history / Burrud Productions
Schlessinger Media. -- Wynnewood, PA: Schlessinger Media, 2000. (QE 508 G345 2000 VIDEO)

1 videocassette (23 min.) : sd., col. ; 1/2 in. + 1 teacher's guide (5 p. ; 19 x 28 cm. folded to 19 x 10 cm.)
Teacher's guide includes program summary, vocabulary, discussion for before and after viewing, questions, follow-up activities and resources

In this video students will examine a time line of the earth's history, starting with its violent beginnings billions of years ago.
VHS

Closed-captioned for the hearing impaired

GRADES: 5-8

Earth Science in Action : Land formations / Burrud Productions
Schlessinger Media. -- Wynnewood, PA: Schlessinger Media, 2000. (GB 401.5 L257 2000 VIDEO)

1 videocassette (23 min.) : sd., col. ; 1/2 in. + 1 teacher's guide (5 p. ; 19 x 28 cm. folded to 19 x 10 cm.)
Combines live action and animation

Teacher's guide includes program summary, vocabulary, discussion for before and after viewing, questions, follow-up activities and resources

Looks at how forces of nature create the diverse types of terrain.
Examines the differences between mountains and plains, valleys and
canyons, bays and peninsula
VHS
Closed-captioned for the hearing impaired
GRADES: 5-8

PUBLICATIONS

Convection, a current event : teacher's guide / Gould, Alan. --
Reprinted with revisions. -- Berkeley, CA: Great Explorations in
Math and Science (GEMS), Lawrence Hall of Science, University of
California, 1996, c1988. (Q 181 .G43)
42, [10] p. : ill. ; 28 cm.
Teacher's guide with class activities. Session 1:
Observing convection in water -- Session 2: Getting the
whole picture -- Session 3: Convection and wind.
Explains convection inside the earth as it relates to
magma flow and continental drift.
GRADE: 6-9

**Earthdance : how volcanoes, earthquakes, tidal waves and geysers
shake our restless planet** / Nicolson, Cynthia Pratt. -- Toronto:
Kids Can Press, c1994.(QE 29 .N5 1994)
48 p. : col. ill. ; 28 cm.
GRADES: ELEMENTARY

Geology : the active earth / New & expanded ed. - New York: Learning
Triangle Press, c1997. (QE 28 L4 1997)
v, 90 p. : ill., maps ; 28 cm.
Briefly covers the structure of the earth, plate
tectonics, earthquakes and volcanoes, rocks and
minerals, landforms, and fossils. Includes activities
and reproducible "Copycat" pages.
GRADES: ELEMENTARY-JR. HIGH

**Geology crafts for kids : 50 nifty projects to explore the marvels of
planet earth** / Anderson, Alan H. -- New York: Sterling Pub. Co, c1996.
(QE 29 .A59 1996)
144 p. : col. ill. ; 27 cm.
School Library Journal review: "Useful, focused...a boon
to students seeking projects, and to teachers and nature
counselors...Clear, full-color photos."
GRADES: ELEMENTARY

Geology fact book / Boyer, Robert Ernst; Snyder, P. B. --
Northbrook, IL: Hubbard Press, c1986.(QE 28 .B68 1992)
48 p. : ill., maps ; 26 cm.
Describes the origin and age of the earth, its
composition and physical properties, the forces that
change it, and the significance of its fossils.

Geology rocks! : 50 hands-on activities to explore the earth /
Blobaum, Cindy. -- Charlotte, VT: Williamson, c1999. (QE 29 .B57 1999)
96 p. : ill. (some col.) ; 26 cm.
Hands-on activities introduce the science of geology and

explain the formation and history of the earth.
GRADES: ELEMENTARY

Stone wall secrets / Thorson, Kristine; Thorson, Robert M. --
Gardiner, ME: Tilbury House, 1998. (QE 42 .D45 1998)
20 leaves : ill. col. ; 28 cm.
As he and his grandson walk along the stone walls
surrounding their New England farm, an old man shares
stories about the geologic history of the stones as well
as some of the memories they hold for him. There is a
companion Teacher's Guide "Stone wall secrets, exploring
geology in the classroom, teacher's guide".
GRADES: 3-7

**Stone wall secrets : exploring geology in the classroom, teacher's
guide** / Deike, Ruth; Thorson, Kristine.; Thorson, Robert. --
Gardiner, ME: Tilbury House, c1998. (QE 42 .D45x 1998)
vi, 90 p. : ill. ; 28 cm.
This teacher's guide is a companion to the book "Stone
Wall Secrets". Explores themes such as the origin of the
universe; the rock cycle; and why the woolly mammoth
became extinct.
GRADES: 3-7

HYDROLOGY

KITS

River cutters -- Berkeley, Calif.: Lawrence Hall of Science,
University of California at Berkeley, 1999. (GB 1201 .K3 1999b KIT)
1 teacher's guide, 1 folder of masters, 8 envelopes, 2 2-qt.
plastic pitchers, 1 1-qt. plastic measuring cup, 1 1-pint plastic
bottle, 8 clear plastic containers, 6 plastic bottles, 2 clear
plastic tubes, 3 plastic valves, 6 plastic T-valves, 1
screwdriver, 1 tube of household glue, 1 candle, 1 5-qt. plastic
bucket, 6 black plastic garbage bags, 100 index cards, 6 metal
spoons, 6 sponges, 1 surgical mask, 1 battery-operated alarm
clock, 8 green plastic 1-pint baskets, 1 atomizer, 6 aluminum pie
pans, 6 blocks of wood, 8 drinking straws, 2 packages of cotton
swabs, 5 bottles of food coloring ; in container 61 x 36 x 28 cm.
+ 2 10-pound bags of filter powder.
Although the full kit was purchased, after classroom
usage certain consumable items such as drinking straws
and cotton swabs may need to be supplied by the teacher.
Instructions for building a model river system using
diatomaceous earth, to illustrate rivers as dynamic
systems: erosion, weathering, deposition over geologic
time. Hands-on activities show how certain human
activities impact natural systems.
GRADES: 6-9

CD-ROM

Water: vapor liquid and solid Version 1.0 / EOA Scientific Systems, Inc. -
- Halifax, N.S.: EOA Scientific Systems, Inc. c2001. (QC 920 W324 2001 CD-
ROM)
1 computer optical disc : sd., col. ; 4 3/4 in

Title from disc label

Covers topics such as fresh water, the cryosphere, an introduction to the atmosphere, the atmosphere in motion, and weather forecasting. Watersheds, human activities and climate, and reading weather charts are included.

GRADES: 6-12

VIDEO

Earth Science in Action : The water cycle [videorecording] / Schlessinger Media Burrud Productions. -- Wynnewood, PA: Schlessinger Media, c2000. (GB 848 W324 2000 Video Teach)

1 videocassette (23 min.) : sd., col. ; 1/2 in + 1 teacher's guide
Closed-captioned for the hearing impaired

Teacher's guide includes program summary, vocabulary, discussion of before and after viewing, questions, follow-up activities and resources

Executive producers, Andrew Schlessinger & Tracy Mitchell ; produced and directed by Burrud Productions

PUBLICATIONS

Earth : the water planet / Gartrell, Jack E; Crowder, Jane; Callister, Jeffrey C. -- Rev. ed. -- Arlington, Va: National Science Teachers Association, c1992. (QC 920 .G37 1992)

x, 191 p. : ill., maps ; 28 cm.

Chapters: Can water move through solid rock? -- What makes clouds? -- How do streams move through mountains? -- Why is the ocean salty? Includes activities and experiments.

GRADES: MIDDLE GRADES

Earth Science in Action : The water cycle / Schlessinger Media Burrud Productions. -- Wynnewood, PA: Schlessinger Media, c2000. (GB 848 W324 2000 Video Teach)

1 videocassette (23 min.) : sd., col. ; 1/2 in + 1 teacher's guide
Closed-captioned for the hearing impaired

Teacher's guide includes program summary, vocabulary, discussion of before and after viewing, questions, follow-up activities and resources

Executive producers, Andrew Schlessinger & Tracy Mitchell ; produced and directed by Burrud Productions

River cutters : Teacher's guide / Kaufmann, Jefferey. -- Berkeley, CA: Lawrence Hall of Science, University of California at Berkeley, 1999, c1989. (GB 1201 .K3 1999)

109 p., [2] leaves : ill. ; 28 cm.

Instructions for building a model river system using diatomaceous earth, to illustrate rivers as dynamic systems: erosion, weathering, deposition over geologic time. Hands-on activities show how certain human activities impact natural systems.

N.B. According to many teachers the initial preparation time is substantial and messy and best done outdoors on picnic tables if possible; but well worth the trouble. Eight 45-minute sessions.

GRADES: 6-9

Water matters : water resources teacher's guide, vol.1 / Kauffman, Sue Cox. -- Arlington, VA: National Science Teachers Association, c1994. (GB 658 .K3 v.1 1994)

31 p. : ill. ; 28 cm + poster set.

The teacher's guide provides background information and suggestions for classroom activities: How do we treat our wastewater!--Wetlands: water, wildlife, plants & people.

GRADE: 3-8

Water matters : water resources teacher's guide, vol. 2 / Crowder, Jane. -- Arlington, VA: National Science Teachers Association, 1997. (GB 658 .K3 v.2 1997)

31 p. : ill. ; 28 cm. + 6 posters : col. ; 62 x 92 cm. folded to 31 x 23 cm.

Explores water highways; the hidden water resources underground; and teaches about water quality and how to protect it.

GRADES: 3-8

Watersheds : a practical handbook for healthy water / Beck, Gregor Gilpin. -- Willowdale, Ont.: Firefly Books, 1999. (QH 102 .D63 1999)

152 p. : ill., maps ; 26 cm.

Ecological overview from the simple concept of a watershed to the biological intricacies of a wetland ecosystem. Includes water and nutrient cycles; bioregions and aquatic habitats; exotic species invasion; water and air pollution; ecological restoration; habitat loss. "How can I help" sections provide practical and meaningful ways individuals can make a difference to the health of watersheds.

MAPS & GLOBES

MODEL

The map projection model. [model] -- Northbrook, IL: Hubbard Scientific Co. c1963. (GA 110 .M3 KIT)

1 model : col. ; 29x21x21 + 3 maps and study guide.

Includes a terrestrial globe (8"diameter) with three transparent maps representing cylindrical, conical and azimuthal projections.

Physiographic relief globe [globe] -- Northbrook, IL: Hubbard Scientific Co. c1964, updated 1983.(G 3171 .C2 P44 1964 GLOBE)

1 model (2 parts) : plastic ; in box 39 x 39 x 24 cm. + 1 overlay disk, 1 study guide, 1 stand.

The 12" diameter plastic globe opens at the equator so students can explore the earth's core. The cutaway view reveals the thin crust, thick mantle, and inner and outer cores. The removable disk extends two inches around the Globe for study of the earth's layers of atmosphere.

CD-ROMS

Introduction to topographic maps / Pinzke, Kenneth. -
Version 1.0. -- Tijeras, NM: Tasa Graphic Arts, c1994.
(GA 125 .P56 1994 CD-ROM)

1 computer laser optical disk : col. ; 4 3/4 in. + 1 installation
guide ([4] p. ; 12 cm.) + 1 map (58 x 46 cm.)

How to use topographic maps to determine elevations,
landform types, and principles of scale and location;
how to draw contour lines and construct topographic
profiles.

Accompanied by map: Southwest Pueblo Quadrangle,
Colorado-Pueblo Co., 7.5 minute series (Topographic) /
United States Dept. of the Interior, Geological Survey,
1961, rev. 1974. Macintosh: 8 bit graphics, CD-ROM drive
(double speed or better), 4MB RAM with System 6.0.7 or
6 MB RAM with System 7.x, 25 MHz 68030 or better.
Windows: IBM 386 or better, SVGA video card, CD-ROM
drive (double speed or better), 4 MB RAM, Windows 3.0
(3.1 for sound boards)

A topographic field trip of Washington, D.C -- Washington, D.C.: U.S.
Geological Survey, 1996.
(G 3850 .T6 1996 CD-ROM)

1 computer laser optical disc : sd., col. ; 4 3/4 in.
Students learn how to examine spatial information and
relate it to real-world features by taking a multimedia
tour of the Nation's Capital.

Macintosh only version. System requirements: All
Macintosh systems minimum 8MB of RAM, System 7 or
greater; 13-inch monitor or greater; 256-color;
Macintosh-compatible CD-ROM drive
GRADES: MIDDLE SCHOOL

VIDEO

Earth Science in Action : Topography / Schlessinger Media
Burrud Productions -- Wynnewood, PA: Schlessinger Media, c2000.
(GA 105.6 T675 2000 VIDEO)

1 videocassette (23 min.) : sd., col. ; 1/2 in. + 1 teacher's guide
on leaflet (5 p. ; 19 x 29 cm.)

Teacher's guide in leaflet inserted on container

Teacher's guide and other resources on this topic are available
online

Closed-captioned for the hearing impaired

Director, John Burrud ; executive producers, Andrew Schlessinger and
Tracy Mitchell

This video shows how forces like earthquakes, volcanoes, water and
wind have changed the Earth's surface over countless centuries; why
studying these changes is important to learning about our planet's
past and future; how cartographers map the floor of the oceans and
how you can make a simple topographic map of your own

VHS

GRADES: 5-8

PUBLICATIONS

How to teach with topographic maps / Van Burgh, Dana; Lyons,
Elizabeth N; Boyington, Marcy. -- Arlington, VA: National Science

Teachers Association, c1994. (GA 130 .V36 1994)

23 p. : ill. (some col.) ; 28 cm.

Section 1 provides an overview and background information for the teacher. Section 2 has classroom activities to help teach topo map skills, including how to use topo maps for environmental studies.

USGS 7.5 minute series topographic map, folded to 18 x 27 cm., stapled into center of book.

GRADES: MIDDLE-HIGH SCHOOL

Maps and globes / Knowlton, Jock. -- New York: Thomas Y. Crowell, 1985. (GA 105.6 .K58 1985)

42 p. : ill., col. ; 25 cm.

Maps and map-making explained in simple language for elementary grades. This little book could be used by teachers to explain such concepts as scale: "How to put big countries on small pieces of paper"; and "how maps put our round earth on flat paper".

GRADES: ELEMENTARY GRADES

A teacher's guide to the San Francisco Bay Area geophysics maps (U.S. Geological Survey GP-1006 and GP-1007) / Langenheim, Victoria E; Gordon, Leslie. -- Reston, VA: U.S. Geological Survey, [1995?] (USGS OFR 95-479)

35 p. : col. ill., maps : 28 cm.

The booklet is a teacher's guide to the U.S. Geological Survey maps that show gravity and magnetic data in contour form superimposed on a LANDSAT satellite image of the San Francisco Bay area... describes how gravity and magnetism help "see" beneath the earth's surface. Helps teachers formulate exercises. The two USGS maps can also be borrowed.

GRADES: HIGH SCHOOL

METEORITES

PUBLICATIONS

Meteorites / Hutchison, Robert; Graham, Andrew. -- New York: Sterling Pub, 1993. (QB 755 .H88 1993)

60 p. : ill. (some col.) ; 20 cm.

Good primer on meteorites, including their origin and the different specimens which have been found.

GRADES: JR. HIGH-HIGH SCHOOL

METEOROLOGY

PUBLICATIONS

Project earth science: meteorology / Smith, P. Sean; Ford, Brent A. - Arlington, VA: National Science Teachers Association, c1996. (QC 869.3 .S65 1996)

233 p. : ill., maps ; 28 cm.

Nineteen hands-on activities for students, plus supplemental readings for teachers with the detail they need to feel comfortable with each topic. Teaches how to

read weather maps and make forecasts, model the water cycle on a tabletop, and use real data to track Hurricane Andrew over ocean and land. Other activities explain why the equator heats more quickly than the poles and why dust is needed for cloud formation.
GRADES: 5-10

NATURAL RESOURCES

VIDEOS

Earth Science in Action : Natural resources / Schlessinger Media Burrud Productions. -- Wynnewood, PA: Schlessinger Media, c2000. (QH 75 A3 2000 VIDEO)
1 videocassette (23 min.) : sd., col. ; 1/2 in + 1 teacher's guide
Closed-captioned for the hearing impaired
Teacher's guide includes program summary, vocabulary, discussion of before and after viewing, questions, follow-up activities and resources
Executive producers, Andrew Schlessinger & Tracy Mitchell ; produced and directed by Burrud Productions
An overview of earth's natural resources and how we can conserve them.
VHS
GRADES: 5-8

OCEANS

CD-ROMS

Introduction to earth's oceans Version 1.0 / EOA Scientific Systems, Inc. -- Halifax, N.S.: EOA Scientific Systems, Inc. c2001. (GC 21 015 2001 CD-ROM)
1 computer optical disc : sd., col. ; 4 3/4 in
Title from disc label
Covers topics such as structure of the Earth's oceans, the hydrologic cycle, seafloor spreading, and ocean floor topography
System requirements for Windows: Windows 98/95/NT/2000; Pentium; CD-ROM drive; QuickTime; web browser
System requirements for Macintosh: Macintosh OS 7.1+; iMac or G3+; CD-ROM drive; QuickTime; web browse
GRADES: 6-12

Waterworld Version 1.0 / EOA Scientific Systems, Inc. -- Halifax, N.S.: EOA Scientific Systems, Inc. c2001.
(GC 21 W333 2001 CD-ROM)
1 computer optical disc : sd., col. ; 4 3/4 in
Title from disc label
Covers topics such as special properties of water, ocean heating and ocean currents, waves and tides, the global conveyor belt, the coastal zone, and physical and chemical properties of pure water and seawater
GRADES: 6-12

PUBLICATIONS

Diving into oceans -- New York: Learning Triangle Press, c1997.
(GC 21 .D49 1998)

94 p. : ill. (some col.), col. map ; 28 cm.

Chapters: Physical ocean--Life in the ocean--Along the coast and close to shore--People and oceans. Chapters include background information for teachers. Activities and "Copycat" pages, and instructions for making a pop-up coral reef.

GRADES: ELEMENTARY-MIDDLE SCHOOL

Ocean / Sayre, April Pulley. -- 1st ed. -- New York: Twenty-First Century Books, 1996. (GC 21.5 .S29 1996)

80 p. : col. ill. ; 24 cm.

Chapters: The ocean biome--World's oceans--Physical features of oceans--Ocean life--Animal adaptations and diversity--People and oceans.

GRADES: UPPER ELEMENTARY-JR. HIGH

PALEONTOLOGY

KITS

Fossils [kit] -- Fort Collins, CO: Scott Resources, 1994.
(QE 714.3 .F68 1994 KIT)

1 videocassette, 8 plastic bags containing samples and tools, 1 teacher's guide ; in box 19 x 59 x 36 cm.

Designed to help students learn about basic concepts of paleontology. The kit includes material for nine hands-on lab stations, and reproducible activity sheets. The video (20 min.) provides background information for understanding and completing the lab stations: 1.

Geologic time--2. Fossil identification-- 3. Estimating a dinosaur's size from a tooth--4. Petrification--5.

Footprint clues--6. Ancient environments--7. Molds and casts--8. Definition-Fossils or frauds--9. Future fossils.

GRADES: 7-12

VIDEO

Earth Science in Action : Fossils / Burrud Productions
Schlessinger Media. -- Wynnewood, PA: Schlessinger Media, c2000.
(QE 714.5 F752 2000 Video)

1 videocassette (23 min.) : sd., col. ; 1/2 in. + 1 teacher's guide (5 p. ; 19 x 28 cm. folded to 19 x 10 cm.)

Combines live action and animation

Teacher's guide includes program summary, vocabulary, discussion for before and after viewing, questions, follow-up activities and resources

Executive producers, Andrew Schlessinger and Tracy Mitchell

This video teaches students how fossils were formed and what they can tell scientists about the earth's past

VHS

Closed-captioned for the hearing impaired

GRADES: 5-8

PUBLICATIONS

A nest of dinosaurs : the story of Oviraptor / Norell, Mark. -- New

York: Doubleday, c1999.(QE 862 .S3 N67 1999)
42 p. : col. ill. ; 23 x 29 cm.
Describes how the authors became paleontologists; their expeditions to the Gobi Desert in Mongolia and the important fossils they found there.
GRADES: ELEMENTARY GRADES

The tiniest giants : discovering dinosaur eggs / Dingus, Lowell. --
New York, NY: Random House, c1999.(QE 862 .D5 D49285 1999)
42 p. : ill. (some col.), col. map ; 22 x 29 cm.
Describes the efforts of paleontologists to arrange an expedition to search for dinosaur fossils in the inhospitable region of Patagonia in southern South America.
GRADES: ELEMENTARY GRADES

PLATE TECTONICS

CD-ROM

Evolving earth plate tectonics / EOA Scientific Systems, Inc. Neo SCI (Firm) -- Version 1.0 -- Halifax, NS: EOA Scientific Systems, c2001.(QE 511.4 E965 2001 CD-Rom)
1 computer optical disc : col. ; 4 3/4 in
Covers topics such as a look at Earth through geologic time, Earth's lithosphere in motion, plate tectonics, volcanoes, earthquakes, and case studies on California, North Carolina and the Appalachian Mountain range
GRADES: 6-12

The theory of plate tectonics / Tarbuck, Edward J; Tasa, Dennis; McNeill, Leon. -- Version 1.2. -- Tijeras, NM: Tasa Graphic Arts, c1999. (QE 511.4 .T37 1999 CD-ROM)
1 computer laser optical disk : col. ; 4 3/4 in. + 1 installation instructions (4 p. ; 12 cm.)
"An excellent educational CD-ROM product...an incredible tour-de-force of moving continents, from continental drifts through hot spots..." Geotimes Magazine. System requirements: IBM compatible 486 or better; SVGA (256 colors in 640 x 480); CD-ROM drive (double speed minimum); 4MB RAM (8MB or more suggested); Windows 3.1 or Windows 95/NT System requirements: Macintosh with 256 color graphics; CD-ROM drive (double-speed minimum); 5 MB of free RAM memory; System 6.0.7 or newer
GRADES: 7-12

VIDEO

Plate tectonics: the puzzle of the continents / Saperstone, Herb I. -- Ft. Collins, CO: Scott Resources, 1990. (QE 511.4 .P55 VIDEO)
1 videocassette (18 min.), (VHS) : color ; 1/2 in + 1 teacher's guide.

PUBLICATIONS

This dynamic earth : the story of plate tectonics / Kious, W.

Jacquelyne; Tilling, Robert I. -- Washington, DC: U.S. Geological Survey, [between 1994 and 1996](QE 511.4 .K56 1994)
77 p. : ill. (some col.), maps (some col.) ; 22 x 28 cm.
GRADES: MIDDLE-HIGH SCHOOL

ROCKS & MINERALS

KIT

Common ground : modern mining and you -- Peoria, IL: Caterpillar Inc, c1992. (TN 19 .C65 1992)
1 videocassette (26 mins.) + 1 teacher's guide (50 p. ; 23 cm.)
Discusses current mining practices and products....
strives to show an understanding of society's demand for minerals and the need for environmental protection.
The video is divided into different segments so teachers can stop and start as time and lesson plans dictate.
Lesson Plans: Minerals and the products of mining--
Reclamation and recycling--Modern mining in a changing world--Careers in mining--Economics.
GRADES: UPPER ELEMENTARY-HIGH SCHOOL

Gold Rush! : an event-based science module / Wright, Russell G. -- Palo Alto, CA: Dale Seymour Publications, 1997.(F 865 .W7 KIT)
1 videocassette (6 min. : 1/2 in.) + 1 teacher's guide (76 p.)
The California Gold Rush of 1849 is the focus of a five-week study of rocks and minerals. The 6-minute videotape "Secrets of the Gold Rush", produced by Montgomery County Public Schools, depicts the actual discovery of gold that led to the Gold Rush. Text includes science and interdisciplinary activities.
GRADES: 6-9

Ideal geological collection -- Oak Lawn, IL: Ideal School Supply, 1985. (QE 363 .I33 1985 KIT)
30 rock specimens ; in box, 11 x 18 cm., in display box, 49 x 63 cm. + 1 teacher's manual ([15] p. ; 28 cm.) + 1 study guide "Rocks and Minerals" + 1 display diagram (col.)
"Designed as an introductory study in both geology and mineralogy. .. does not presume a previous knowledge of the subject on the part of the teacher or student... . A small portion of the earth's crust, as represented in the Ideal diagram, will be examined in detail as a study in geology. Then each rock or mineral appearing in the diagram will be put in position and studied as a part of the earth's crust and as an individual rock or as a study in mineralogy." -- Teacher's manual, p. [1]

Identifying igneous rocks -- [s.l.] Scott Resources, [s.n.] (QE 461 .I4 KIT)
1 framed chart with 15 specimens attached (24" x 16") + 10 student charts and 10 sets of rock samples + 30 student reference charts + 1 plastic bag of test material (nail, penny, streak plate, glass plate, dropper bottle, magnet, magnifier)
To acquaint students with the origin, texture,

composition and interrelationships of igneous rocks. This is accomplished by providing a key to the systematic arrangement of the igneous rocks and graphically displaying these properties

Minerals -- Fort Collins, CO: Scott Resources, c1993.

(QE 368 .S3 1993 KIT)

1 videocassette, 13 plastic bags containing mineral samples and tools, 1 teacher's guide (loose leaf) ; in box 19 x 59 x 36 cm. The kit contains material for nine hands-on lab stations. The video (20 minutes) introduces five families of minerals and discusses their physical properties. Using the samples and equipment included in the kit, students can practice identifying minerals in a series of lab stations: 1. Color--2. Streak--3. Luster--4. Cleavage--5. Hardness--6. Crystal form--7. Density-- 8. Optical properties--9. Calcite test--10. Definition--11. Unknowns.

GRADES: 7-12

The rock cycle -- Fort Collins, CO: Glenview, IL: Scott

Resources, 1993. (QE 425.4 .R6 1993 KIT)

1 videocassette, 13 plastic bags containing rock samples and tools, 1 tube, 1 teacher's guide (loose leaf) ; in box 19 x 59 x 36 cm.

Unravels the geologic processes which create, change and break down earth materials. Using the samples and equipment included in the kit students can practice identifying and breaking down earth materials with a series of lab stations: 1. Crystal growth--2. Physical weathering--3. Igneous rocks-- 4. Shake it up, move it out!--5. Chemical weathering-the great disappearing act-- 6. Sediments to rock-lithification station-- 8. Sedimentation--11. Before and After.

GRADES: 7-12

Rock cycle, model activity set / Miller, Eric. -- Chippewa,

WI: Hubbard Scientific Co. c1995. (QE 432.2 .M5 KIT)

1 plastic relief model with clear plastic overlay : col. ; 45 x 60 cm. + 1 teacher's guide (10 p) in notebook + marker + 19 small rock specimens (4 in plastic containers)

3-D plastic model depicts the substructures of all types of rock formations; coordinating rock and sediment specimens help students understand the rock cycle.

Teacher's guide contains lab activities, color overhead transparency and blackline reproduction master.

GRADES: 5-12

Stories in stone -- Berkeley, CA: Lawrence Hall of Science,

University of California at Berkeley, 1999. (QE 432.2 .C38b 1995 KIT)

1 teacher's manual, 1 folder of masters, 8 cardboard trays, 32 magnifying glasses, 1 plastic bucket, 15 paper plates, 9 aluminum ashtrays, 9 pieces of granite, 9 pieces of halite, 9 pieces of slate, 9 pieces of quartz, 9 pieces of obsidian, 9 pieces of galena, 9 pieces of basalt, 9 pieces of conglomerate, 9 rolls of transparent tape, 1 2-qt. plastic pitcher, 16 large plastic cups,

24 small plastic cups, 22 sticks of colored clay, 1 bag of kosher salt, 1 bag of clay flour, 1 bag of coarse sand, 1 bag of fine sand, 32 plastic straws, 8 plastic knives, 16 clear plastic spoons, 9 plastic ice cube trays, 9 candles, 1 bottle of phenyl salicylate, 1 bottle of clear nail polish, 1 bottle of correction fluid, 1 plastic measuring spoon, 2 marking pens, 1 roll of masking tape, 2 sponges ; in container 61 x 36 x 28 cm.
N.B. Consumable items such as masking tape may not be included.

Stories in stone : teacher's guide / Cuff, Kevin. -- Berkeley, CA: LHS GEMS, 1995.(QE 432.2 .C83 1995)

156 p. : ill. ; 28 cm [included is a set of 10 rock and mineral samples]

This teacher's guide presents a unit that deepens understanding of the main processes that lead to the formation of igneous, sedimentary and metamorphic rocks. Working with a set of ten rock and mineral samples (included) students learn the distinction between rocks and minerals and to classify samples. They observe salt crystal formation and make models of several crystal shapes. They use salt (not included) to create a molten material, then observe the formation of crystals at two different temperatures. Clay modeling activities provide students with insight into the rock cycle and plate tectonics. Chapters: Rocks and minerals--Applying standard methods of a classification--Sedimentary, igneous and metamorphic rocks--Erosion and deposition--Melting and crystallization-- Crystal shapes--Earth processes--The rock cycle.

GRADES: 4-9

CD-ROM

California gold mines: a sesquicentennial photograph collection / Guerin-Place, Rosemary; Roefs, Lyn; Twomey, Kathleen. -- Sacramento, CA: California Dept. of Conservation, Division of Mines and Geology, c1998. (DMG CD 98-001 1998 CD-ROM)

1 computer laser optical disc ; 4 3/4 in.

Contains 300 black and white scanned photographs from the Division of Mines and Geology library collection. The photographs, taken between 1852 and 1984, depict California gold mines, mining techniques, and mining equipment. Also includes a California historic gold mines map. Searching can be done by name of mine, county, photographer, subject and year, or by a county map search.

System requirements: Windows 3.1, 95 or NT. IBM compatible 386 or higher PC.

GRADES: MIDDLE-HIGH SCHOOL

California minerals and mines / Dunn, Melanie; Guerin-Place, Rosemary; Roefs, Lyn; Twomey, Kathleen -- Sacramento, CA: California, Dept. of Conservation, Division of Mines and Geology, c2000. (DMG CD 2000-001 2000 CD-ROM)

1 computer laser optical disc : col. ill. ; 4 3/4 in.

Approximately 1000 scanned photographs of California minerals and mines. Mineral text includes physical

properties, classification, crystallography, chemical formulas, specimen descriptions, origin of mineral names, varieties and synonyms, localities, and mineral uses. Mine images include both current and historical photographs. Includes glossary, "slide show" quizzes, rock and mineral collecting, and map search.

System requirements: IBM compatible PC; Windows 95, 98 or NT; CD-ROM drive

GRADES: MIDDLE-HIGH SCHOOL

Hands-on mineral identification --

Albuquerque, NM: Tasa Graphic Arts, c1999.(QE 372.2 .H3 1999 CD-ROM)

1 computer laser optical disc : sd. ; col. ; 4 3/4 in. + insert.

In-depth examination of minerals, including the formation, properties, and compositions of crystals, gems and ores.

The photo-atlas of minerals for Windows -- Version

1.3. -- Los Angeles, CA: Los Angeles County Museum of Natural History, 2000. (QE 357 .P5 2000 CD-ROM)

1 computer optical disc ; 4 3/4 in.

Descriptive data for all known minerals, including color images, name pronunciations, name origins, crystal forms, localities with maps, and Strunz mineral classification.

Rocks, minerals and resources Version 1.0 / Halifax, NS: EOA Scientific Systems, Inc., 2001. (QE 432.2 R683a 2001 CD-ROM)

1 computer optical disc : col. ; 4 3/4 in

Explores the fascinating world of beautiful mineral crystals and learns about the three great rock groups that make up our entire planet - igneous, sedimentary and metamorphic rocks

GRADES: 6-12

The study of minerals -- Albuquerque, NM: Tasa Graphic Arts, c1997.(QE 363.2 .S78 1997 CD-ROM)

1 computer laser optical disc : sd. ; col. ; 4 3/4 in. + insert.

In-depth examination of minerals, including the formation, properties, and compositions of crystals, gems and ores. Lists Internet sites about mineral resources, collecting, research, museums, and careers in mineralogy.

Macintosh system requirements : 25 MHZ 68030 or better Macintosh with 256 color graphics, 13" or larger display (640 x 480 or higher), CD-ROM drive (double-speed minimum), 5 MB free RAM, System 6.0.7 or newer IBM system requirements: 486 or better, SVGA video card (256 color graphics in 640 x 480), CD-ROM drive (double-speed minimum), 4 MB RAM, Microsoft Windows 3.1 or Windows 95, Windows compatible sound card.

The wonders of rocks and minerals -- Albuquerque,

NM: Tasa Graphic Arts, c1996.(QE 432.2 .W6 1996 CD-ROM)

1 computer optical disc : sd., col. ; 4 3/4 in.

Explores the difference between rocks and minerals; the three rock groups and the geological processes involved in their formation. Learn to identify and name minerals

and rocks, just like a geologist does on a field trip.
Macintosh system requirements : 25 MHZ 68030 or better
256 color graphics ; 13" or larger display (640 x 480 or
higher) ; CD-ROM drive (double-speed minimum) ; 5 MB of
free RAM ; system 6.0.7. or newer. IBM System
requirements: 486 or better; SVGA video card (256 color
graphics m 640 x 480); CD-ROM drive (double-speed
minimum); 4 MB RAM; Microsoft Windows 3.1 or Windows 95;
Windows compatible sound card.
GRADES: ELEMENTARY-HIGH SCHOOL

VIDEO

Earth Science in Action: Minerals / Schlessinger Media Burrud Productions.
-- Wynnewood, PA: Schlessinger Media, 2000.
(QE 365.2 M664 2000 Video)

1 videocassette (23 min.):sd., col. ; ½ in + 1 teacher's guide.
Closed-captioned for the hearing impaired
Teacher's guide includes program summary, vocabulary, discussion of
before and after viewing, questions, follow-up activities and
resources
Executive producers, Andrew Schlessinger & Tracy Mitchell ; produced
and directed by Burrud Productions
The makeup of minerals and their properties are probed. A look at
where to find minerals and of their many diverse uses
VHS
GRADES: 5-8

Earth Science in Action : Rocks / Burrud Productions
Schlessinger Media -- Wynnewood, PA: Schlessinger Media, c2000.
(QE 432.2 R682 2000 VIDEO)

1 videocassette (23 min.) : sd., col. ; 1/2 in. + 1 teacher's guide
(5 p. ; 19 x 28 cm. folded to 19 x 10 cm.)
Combines live action and animation
Teacher's guide includes program summary, vocabulary, discussion for
before and after viewing, questions, follow-up activities and
resources
This video teaches students about rocks and what they can tell
scientists about the age and geological history of the earth
VHS
Closed-captioned for the hearing impaired
GRADES: 5-8

Let's do mineral science / United States. Bureau of
Mines. -- Littleton, CO: Distributed by SME Foundation for Public
Information and Education. (TN 173 .L4 VIDEO)

1 videocassette (VHS) (30 mins) : sd., col. ; 1/2in. + 1 Activity
Sheet "What are minerals?" (4 leaves)
Six hands-on classroom activities to teach the mining
process, the economics of mining, and from what minerals
various products are made. Activity worksheets included
with this video.

Minerals: building blocks of the Earth -- Fort
Collins, CO: Scott Resources, c1992.(QE 365.2 .M5)

1 videocassette (19 min.) : sd., col. ; 1/2 in. + 1 teacher's

guide ([4] p. ; 18 cm.)

Demonstrates how geologists collect and identify the many different minerals found in the earth's crust, how the arrangement of atoms determines the unique properties of minerals, and how these non-renewable resources provide us with the raw materials for a wide range of products.

GRADES: 7-12

Out of the rock / United States. Bureau of Mines. -- Littleton, CO: Distributed by SME Foundation for Public Information and Education. (TN 173 .N38 VIDEO)

1 videocassette (VHS) (29 mins) : sd., col. ; 1/2 in.

Examines the importance of minerals and mining; provides examples of mineral use in everything from glass to makeup to toothpaste to wiring. Discusses recycling and environmental issues.

GRADES: JR HIGH-HIGH SCHOOL

The Rock cycle / Miller, Eric. -- Fort Collins, CO: Glenview, IL: Scott Resources, 1990. (QE 425.4 .M5 VIDEO)

1 videocassette (18 min.) : sd., col. ; 1/2 in. + 1 teacher's guide.

Unravels the geologic processes which create, change and break down earth materials, as geologist Eric Miller takes the viewer on a field trip through the Rocky Mountains. The three major rock groups are defined using examples from mountain outcrops and streamside sediments. Teacher's guide inside the video cover includes discussion points and class activities.

Crystal & gem / Symes, R. F. (Robert F); Harding, R. R. Dorling Kindersley in association with The Natural History Museum, London, 1991. (QD 906.3 .S96 1991)

64 p. : col. ill. ; 28 cm.

Non-technical, with many excellent color photographs illustrating, for example, the color, identification and twinning of crystals.

Industrial minerals : How they are found and used / Bates, Robert Latimer, 1912. -- Hillside, NJ: Enslow Publishers, 1988. (TN 148 .B37 1988)

64 p. : ill. ; 23 cm.

Describes mineral resources used in such industries as agriculture, printing, and glassmaking, and explains the discovery, mining, and exploitation of deposits.

GRADES: JR. HIGH-HIGH SCHOOL

Metal, mining and the environment / Hudson, Travis, 1946. -- Alexandria, VA: American Geological Institute, c1999. (TD 195 .M5 H84 1999)

64 p. : col. ill., col. map ; 28 cm + 1 poster.

Discusses environmental concerns, metal exploration, various mining methods, such as open pit and underground mining.

Foldout poster has instructions for "Investigating ore deposits" requiring large empty pizza box (unused), magnetic and/or electric stud finder, plexiglas sheet about the same size as pizza lid box.

Mighty minerals : a teaching unit for the 4th grade classroom. -- Anchorage, AL: U.S. Bureau of Mines, Alaska Technology Transfer Office, c1989. (QE 29 .M54 1989)

50 p. : ill. ; 28 cm.

Students will learn the basic characteristics of some 20 featured minerals. Lessons focus on specific facts, applications, and/or current issues related to each mineral. Includes suggested activities, evaluation.

GRADES: 4TH GRADE

Mined it! : a fairy tale with mineral content / Harris, Jeanette M; Harben, Peter. -- Morris, NY: Butternut Books, [1992](TN 148 .H3)

54 p. : ill. ; 28 cm.

Mark and Victoria Kool meet the Magic Mineral Man who reveals to them how minerals and mineral products are so much a part of their everyday lives and activities. Includes notes on minerals and word puzzles.

GRADES: ELEMENTARY GRADES

Out of the rock : integrated learning activities for students / National Energy Foundation (U.S.) -- 2nd ed. -- Salt Lake City, UT: Washington, D.C. National Energy Foundation ; U.S. Bureau of Mines, 1995. (TN 173 .N38 1994)

80 p. : ill. ; 27 cm.

"The purpose... is to provide sound, easy-to-use information and activities for teachers to use with their students."

Includes classroom activities.

Chapters: Minerals, Mineral Resources, Exploration, Processing, Mining Industry, Mining and the environment, Mineral Resource Economics, Safety.

GRADES: ELEMENTARY-JUNIOR HIGH

ROCKS & MINERALS - TEACHER WORKSHOP

PUBLICATIONS

Mineral education activities - Elementary / Mineral Education Conference. 1997. -- Sacramento, CA: [Mineral Education Conference] 1997.(QE 375 .M5)

1 v. various pagings.

Loose-leaf binder containing the background information and class activities presented at a teacher workshop at the 1997 Mineral Education Conference. Sections include: Mineral Uses, Mineral Properties, Mineral Processing, Geology and Exploration, Mining and Environmental Activities, Mining Economics.

GRADES: ELEMENTARY GRADES

Mineral education activities - Jr. High/High School / Mineral Education Conference. 1997. -- Sacramento, CA: [Mineral Education Conference] 1997.(QE 375 .M52)

1 v.

Loose-leaf binder containing the background information and class activities presented at a teacher workshop at

the 1997 Mineral Education Conference. Sections include:
Mineral Uses, Mineral
Mineral Properties, Mineral Processing, Geology and
Exploration, Mining and Environmental Activities, Mining
Economics..
GRADES: JR. HIGH-HIGH SCHOOL

Mineral education conference, June 27-28, 2002, Foothill College -- Los
Altos Hills, CA: California Mineral Education Foundation. -- Pleasant
Grove, CA. California Mineral Education Foundation, 2002.
(QE 375 .M5 2002 TEACH)

1 v. various paging
Loose-leaf binder containing background information and class
activities presented at a workshoop sponsored by the California
Mineral Education Foundation, Foothill College, and California
Geological Survey.

Mineral education : High school -- Littleton, CO: SME Foundation for
Public Information and Education, 1991.(QE 365.2 .M55)

1 v. (looseleaf) : ill. ; 29 cm.
A packet developed by the Education Committee of the
Nevada Mining Association with assistance from a number
of Nevada teachers.
GRADES: HIGH SCHOOL

**Teachers make learning fun : 1996 Mineral Education Conference,
August 14 and 15, California State University, Fresno /** Mineral
Education Conference. 1996. -- Sacramento, CA: [Mineral Education
Foundation] 1997. (QE 375 .M5 1996)

1 v. various paging.
Loose-leaf binder containing the background information
and class activities presented at a workshop sponsored
by the California Mineral Education Foundation, the
California Dept. of Conservation and the Geology Dept.,
CSU, Fresno.
GRADES: JR HIGH-HIGH SCHOOL

Teachers workshop on California mining / Victor Valley Museum. --
Victor Valley College, CA: 1996. (QE 375.5 .C24)

1 v. various pagings.
Loose-leaf binder containing the background information
and class activities presented at a workshop for
elementary, middle school and high school teachers.
Includes activities and worksheets.

SOIL

VIDEOS

Earth Science in Action : Soil / Burrud Productions
Schlessinger Media. -- Wynnewood, PA: Schlessinger Media, c2000.
(S 592.14 S683 2000 VIDEO)

1 videocassette (23 min.) : sd., col. ; 1/2 in. + 1 teacher's guide
Teacher's guide includes program summary, vocabulary, discussion of
before and after viewing, questions, follow-up activities and
resources
Closed-captioned for the hearing impaired

Director, John Burrud ; executive producers, Andrew Schlessinger and Tracy Mitchell

This video teaches students about the different types of soil and how it is important for sustaining plant and animal life. Also, formation of soil and methods of conservation, including fighting erosion

VHS

GRADES: 5-8

VOCATIONAL GUIDANCE

VIDEO

Careers for geoscientists / Mably, Collin; Milling, Marcus E.; Karlen, Jane; Keane, Christopher M. -- Alexandria, VA: American Geological Institute, c1998. (QE 34 .C37 1998 VIDEO)

1 videocassette (41 min.) : sd., col. ; 1/2 in.

To inspire college and high school students to pursue careers in the earth sciences, the video introduces the wide scope of careers in the geosciences, encompassing the atmosphere, the oceans, and the solid earth. A valuable resource for students who are interested in the earth sciences but need a description of real life jobs. Features on the job interviews with geologists and other earth science professionals.

GRADES: HIGH SCHOOL

PUBLICATIONS

"Are you a scientist, too?" : a primer of simple activities for geoscientists visiting K-2 classrooms / Asher-Bolinder, Sigrid. -- Denver, CO: U.S. Geological Survey, 1994. (USGS OFR 94-150)

7 leaves ; 28 cm.

Helps young children learn that they are born with the "tools to do science" by observation and description, using the primary senses of vision, touch, smell. Examples of comparing two bags of sand and then comparing different rocks.

GRADES: K-2

Careers in the minerals industry : a guide for students, parents and teachers -- Littleton, CO: Society for Mining, Metallurgy, and Exploration Inc. 1999. (TN 173 .C3)

15 p. : ill. ; 22 cm.

Explores opportunities in geology, mining, mineral processing, environment, health and safety.

VOLCANOES

KIT

Volcano! [kit] : an event-based science module / Wright, Russell G. - Menlo Park, CA: Innovative Learning Publications, Addison-Wesley Pub. Co, c1997. (QE 522 .W7 1997 KIT)

1 videocassette (8 min.) + 1 teacher's guide (30 p.) + 1 student edition (66 p.)

The eruption of Mt. Pinatubo in the Philippine Islands

is the focus of a six-week study of earth science concepts. Video titled "CNN's The Mt. Pinatubo eruption" is an 8-minute excerpt from CNN's coverage of the event. Text includes science activities as well as math, social studies and writing activities.
GRADES: MIDDLE SCHOOL

VIDEO

America's deadliest volcanoes -- Chicago, IL:

Questar, Inc, 1999. (QE 524 .A4 VIDEO)

1 videocassette (ca. 55 min.) : sd., col. ; 1/2 in.
Features 16 North American volcanoes. "Each waits patiently to explode and mankind can only stand helpless before these lethal timebombs. Spectacular photography captures the fiery forces ignited by these cauldrons of chaos, which include Mt. St. Helens and Mt. Ranier (Washington); Crater Lake and Mt. Hood (Oregon); Mt. Shasta and Lava Beds National Monument (California); Katmai (Alaska); Kilauea, Mauna Loa, Haleakala (Hawaii); and Yellowstone National Park (Wyoming, Montana, and Idaho)."

Earth Science in Action : Volcanoes / Schlessinger Media

Burrud Productions. -- Wynnewood, PA: Schlessinger Media, c2000.

(QE 521.3 V911 2000 Video)

1 videocassette (23 min.) : sd., col. ; 1/2 in + 1 teacher's guide
Closed-captioned for the hearing impaired
Teacher's guide includes program summary, vocabulary, discussion for before and after viewing, questions, follow-up activities and resources
Executive producers, Andrew Schlessinger & Tracy Mitchell ; produced and directed by Burrud Productions
An up-close look at volcanoes to see how they form, what they are, and what causes them to erupt
VHS
GRADES: 5-8

PUBLICATIONS

Janice VanCleave's volcanoes : mind-boggling experiments you can turn into science fair projects / VanCleave, Janice Pratt. -- New York:

Wiley & Sons, c1994. (QE 521.3 .V376 1994)

89 p. : ill. ; 21 cm.
Students can follow step-by-step instructions. Some experiments need adult supervision.

Make your own paper model of a Volcano / Alpha, Tau Rho; Gordon, Leslie C. -- Menlo Park, CA: U.S. Geological Survey, [1991]

(USGS OFR 91-115A)

[3] p. : ill. ; 28 cm.
Instructions and a pattern for making a three-dimensional paper model of a volcano, to help students visualize a stratovolcano and to learn some of the terms used by geologists. Includes a one page "Educator's Guide".

Volcano / Dudman, John. -- New York: Thomson Learning, 1993.
(QE 521.3 .D84 1993)

32 p. : col. ill. ; 28 cm.

Describes what volcanoes are, why they occur, and volcanic eruptions in history. Includes a project to build a paper mache volcano that erupts.

WEATHER

CD-ROM

Climate : remote sensing Version 1.0 / EOA Scientific Systems, Inc. -- Halifax, N.S. EOA Scientific Systems, Inc. c2001. (QC 981 C639 2001 CD-ROM)

1 computer optical disc : sd., col. ; 4 3/4 in

Title from disc label

Covers topics such as climate, climate change, ocean-climate remote sensing, solar radiation, El Nino, and stratospheric ozone

Grades 6-12

System requirements for Windows: Windows 98/95/NT/2000; Pentium; CD-ROM drive; QuickTime; web browser

System requirements for Macintosh: Macintosh OS 7.1+; iMac or G3+; CD-ROM drive; QuickTime; web browser

GRADES: 6-12

Storms, tornadoes floods and drought Version 1.0 / EOA Scientific Systems, Inc.-- Halifax, N.S. EOA Scientific Systems, Inc. c2001. (QC 941 S885 2001 CD-ROM)

1 computer optical disc : sd., col. ; 4 3/4 in

Covers topics such as stormy weather, hurricanes, tornadoes, winter storms, floods, drought, hail, and storms that cost billions of dollars

System requirements for Windows: Windows 98/95/NT/2000; Pentium; CD-ROM drive; QuickTime

System requirements for Macintosh: Macintosh OS 7.1+; iMac or G3+; CD-ROM drive; QuickTime

GRADES: 6-12

Weather forecasting Version 1.0 / EOA Scientific Systems, Inc. -- Halifax, N.S. EOA Scientific Systems, Inc. c2001. (QC 995.43 W362 2001 CD-ROM)

1 computer optical disc : sd., col. ; 4 3/4 in

Covers topics such as weather forecasting, backyard meteorology, reading weather charts, weather satellites, and includes a weather case study on Canada

GRADES: 6-12

Weather fundamentals Version 1.0 / EOA Scientific Systems, Inc. -- Halifax, N.S. EOA Scientific Systems, Inc. c2001. (QC 981 W362 2001 CD-ROM)

1 computer optical disc : sd., col. ; 4 3/4 in

Covers topics such as weather forecasting, backyard meteorology, reading weather charts, weather satellites, and includes a weather case study on Canada

GRADES: 6-12

VIDEO

Earth Science in Action : Weathering & erosion / Burrud Productions
Schlessinger Media. -- Wynnewood, PA: Schlessinger Media, c2000. (QE 570
W362 2000 Video)

1 videocassette (23 min.) : sd., col. ; 1/2 in. + 1 teacher's guide
on leaflet (5 p. ; 19 x 29 cm.)

Teacher's guide includes program summary, vocabulary, discussion of
before and after viewing, questions, follow-up activities and
resources

Closed-captioned for the hearing impaired

Director, John Burrud ; executive producers, Andrew Schlessinger and
Tracy Mitchell

WETLANDS

PUBLICATIONS

WOW! : the wonders of wetlands / Kesselheim, Alan S; Slattery, Britt
Eckhardt; Higgins, Susan; Schilling, Mark R. -- [New ed.] -- St.
Michaels, MD: Bozeman, MT: Environmental Concern Inc. ; The
Watercourse, c1995. (QH 87.3 .W69 1995)

xx, 330 p. : ill. ; 28 cm.

Includes background notes and curriculum keys for
teachers. Wetland activities for classroom and wetland
settings, with interdisciplinary links, assessment
questions, and extensions for all grades.

GRADES: K-12

Wading into wetlands -- Washington, DC: National Wildlife
Federation, 1997. (QH 87.3 .W32 1997)

90 p. : ill. ; 28 cm.

Includes activities with step-by-step instructions,
crafts, and background information that explains
concepts and vocabulary; "Copycat Pages" for classroom
reproduction. Teachers can choose a single activity idea
or teach each chapter as a unit. Each activity includes
teaching objectives, list of materials needed, suggested
age groups, subjects covered.

GRADES: ELEMENTARY - JR. HIGH